





INSECT ORDER OF THE DAY



Odonata includes DRAGONFLIES and DAMSELFLIES. Within the UK there are around 30 dragonfly species and approximately 20 species of damselfly. The name 'Odonata' means 'toothed jaw' – they have biting mouthparts for catching invertebrate prey and are brilliant hunters. They are large, colourful insects and often show sexual dimorphism (males look different to females).

<h2 style="text-align: center;">DAMSELFLY</h2> <p>All wings similar size</p> <p>Eyes separated</p>  <p>Usually rests with wings folded back</p> <p>Almost always seen close to water</p>	<h2 style="text-align: center;">DRAGONFLY</h2> <p>Usually rests with wings lying flat</p> <p>Eyes normally touch each other</p>  <p>Hind-wings normally shorter and wider than fore-wings</p> <p>Can be seen away from water</p>
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Photos (c) Paul Hill

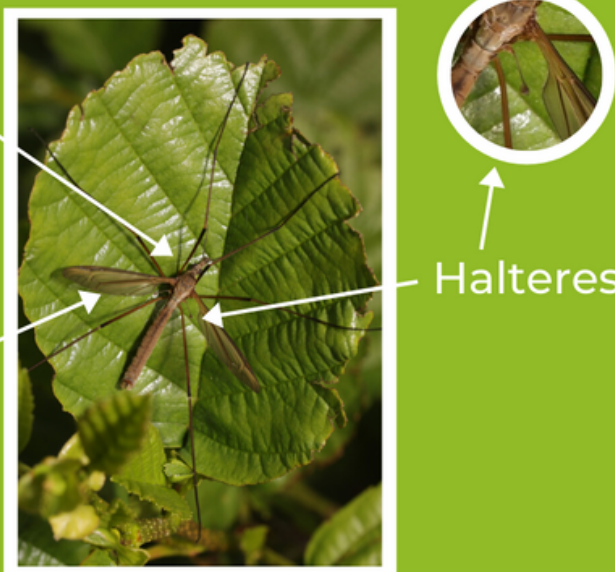
Damselflies: are more 'dainty' looking, and are weaker fliers. Their wings are usually folded back along their body when resting.

Dragonflies: are more 'chunky' and are stronger fliers. Their hind wings are shorter than their front wings and they hold them flat when resting. We hold a total of 6034 odonata records since 2010 representing 43 different species. This makes it our 5th most recorded insect order.

DIPTERA includes all 'True Flies'. It's one of the largest orders, with around 7000 species in the UK alone, making up ~100 different families! These species are incredibly diverse, from colourful hoverflies to long-legged craneflies. To know that you've spotted a true fly, look out for these typical features:

- ✓1 pair of wings. Almost all other insects have 2 pairs although these aren't always easy to see
- ✓Halteres. These replace the hind-wings in flies, they look like lollipops and help with flying. Often you'll need to look closely to see these.
- ✓Large eyes. Other similar looking insects (like bees + wasps) tend to have smaller eyes

DIPTERA FEATURES



Photos (c) Steve McWilliam





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ORTHOPTERA FEATURES

Antennae normally short in grasshoppers and long in crickets



2 pairs of wings

Forewings are often thick covers for the more delicate hind-wings

Stridulate (make noise by rubbing 2 body parts together)

Large back legs for jumping

ORTHOPTERA includes Grasshoppers and Crickets. The main feature to look out for to know that you've spotted a member of this order is the long back legs. These legs include powerful jumping muscles, allowing them to hop long distances. You may have heard them 'stridulating' (the classic grasshopper noise!). Both males and females do this, but males are often better at it. In grasshoppers, 'pegs' on their back legs and these are rubbed against their wings to make the sound. It plays an important role in courtship and is sometimes combined with dancing!

Photo (c) Patrick Clement

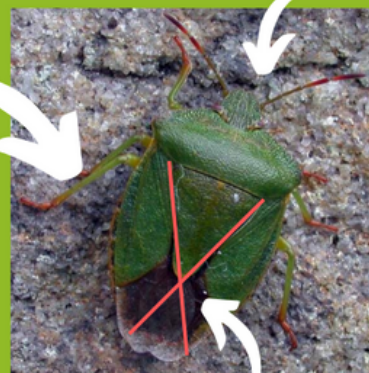
Orthopteran species can often be identified by looking closely at colours and patterns. Out of a total of 33 UK species hold records of 13 of these since 2010; a total of 278 records.

Often people refer to any type of invertebrate as a 'bug'. But did you know that there are a group of insects called 'TRUE BUGS' or HEMIPTERA? Around 2000 species from this group are found in the UK, including insects you might often see in your garden like the impressive shield bugs; froghoppers (which make cuckoo spit); pond skaters and many more. The mouthparts of insects in this order are elongated and form a 'rostrum'. This is like a tube, which is often used to pierce plant stems and suck liquids from within for food. We hold 4787 hemiptera records of 301 species from the last 10 years.

HEMIPTERA FEATURES

Rostrum (sucking mouthparts)

2 pairs of wings



Wings usually meet in an X or Y shape

This helps separate them from beetles where its a T shape



Photos (c) Shane Farrell





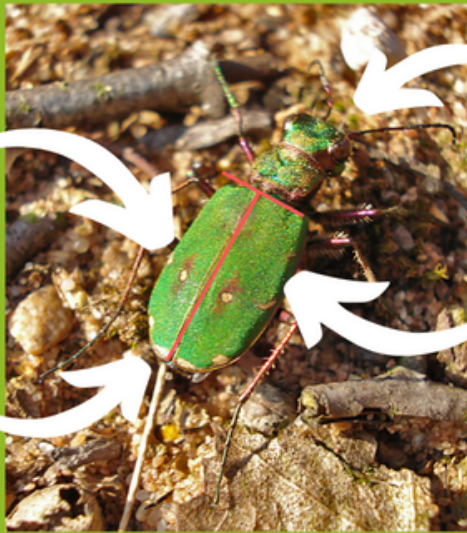
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COLEOPTERA FEATURES

2 pairs of wings

The fore-wings form the elytra / 'wing-cases'



Biting mouthparts

Wings meet in a T shape (not a Y or X)

COLEOPTERA (BEETLES) is the world's largest insect order comprising an impressive 350,000 species! About 4000 of these are found in the UK. Look out for elytra (wing cases) which are often shiny and colourful. Many beetles are predators and have biting mouthparts to catch their prey. They are holometabolous, undergoing complete metamorphosis: egg -->larva-->pupa-->adult . This is a really diverse group and includes familiar groups like ladybirds in addition to lesser known species. We have a total of 10982 Coleoptera records since 2010, representing 760 different species!

Photo (c) Jeff Clarke

There are around 6700 UK species from the order HYMENOPTERA. This diverse insect group includes well-known groups like bees, wasps and ants as well as many parasitic wasps and sawflies. To tell members of this group apart from other similar groups look out for 2 pairs of wings, biting mouthparts and prominent antennae. Apart from sawflies, they also have a thin 'waist' between their thorax and abdomen. Species in this group show an amazing range of lifestyles from eusocial species like honeybees to parasites and parasitoids including gall-forming wasps, 'cuckoos' etc. We hold 11300 records since 2010 making this our 3rd most recorded insect order. This includes records of 421 different species.

HYMENOPTERA FEATURES

Small eyes (compared to true flies)



Waist (but not all species)

2 pairs of wings

Photo (c) Roy Lowry



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BUTTERFLY VS MOTH

DAY-FLYING: UK butterflies are almost always diurnal (active in the day). However some moths are also diurnal.

BRIGHT COLOURS: A lot of butterflies have bright colours whilst a lot of moths are dull. But there are also dull butterflies (eg. Ringlet) and bright moths (eg. Garden tiger)

WING POSITION: Butterflies normally rest with wings held upright. Although they also rest with them held flat for short periods, and for some groups flat is the norm (Skipper family - below).

'CLUBBED' ANTENNAE: Most butterfly antennae are straight with a blob at the end. In some species the 'club' is more of a 'hook' (Skipper family)

WING POSITION: Normally rest with wings held flat, either folded together or open. Although there are exceptions which hold them upright like butterflies (eg. Early thorn-below)

DULL COLOURS: A lot of moths are dull for camouflage. But some are actually very bright (eg. Hawkmoths, Cinnabar)

"FLUFFY"/STRAIGHT ANTENNAE: Moths don't normally have the 'club' at the end like butterflies, but there are exceptions (eg. burnets)

NOCTURNAL: Most moths come out at night but there are some day-flying moths (eg. Silver Y, Six-spot burnet)

All photos (c) Steve J. McWilliam unless otherwise stated

LEPIDOPTERA is made up of moths and butterflies with a total of 160,000 species worldwide and around 2570 in the UK. Species in this order have scales on their wings and many have a proboscis as adults (a tubular mouthpart used to suck liquids). In the UK there are only 59 species of butterfly but over 2500 moths! Take a look below for some tips on telling them apart. Lepidoptera is by far our most recorded insect group with a total of 131842 records of 986 species in the last 10 years.

Find out more about these insect orders:

ODONATA: <https://british-dragonflies.org.uk/>

DIPTERA: <https://www.dipterists.org.uk/>

ORTHOPTERA: https://www.orthoptera.org.uk/about_orthoptera

HEMIPTERA: <https://www.britishbugs.org.uk/>

COLEOPTERA: <https://www.coleoptera.org.uk/>

HYMENOPTERA: <https://www.amentsoc.org/insects/fact-files/orders/hymenoptera.html>

LEPIDOPTERA: <https://butterfly-conservation.org/>

Let us know what you've found:

www.record-irc.co.uk/c2.aspx?Mod=Article&ArticleID=MyPatch_Spotted